Before the Federal Communications Commission
Washington D.C

In the Matter of ET98-153

Revision of Part 15 of the Commission's
Rules Regarding Ultra-Wideband
Transmission Systems

COMMENTS BY BRIAN ZISK, IN THE INTEREST OF THE PUBLIC GOOD.

As an Internet user and developer, and a proponent of increased Internet access for everyone, I believe that there is a definitive need for more powerful, no-license, non-interfering digital radios. Ultra-Wideband technology is uniquely suited for Internet connectivity, especially for replacing the physical wires into homes, businesses, schools, community centers, and government offices.

I have been very active in helping people and organizations get connected to the Internet. As a user working to help as many people as possible make use of this new medium, I have found a major barrier to access is the high cost.

The first webserver I ran in 1994 was on a full time 28.8kbs dedicated phone line. Between telco and ISP charges, the bandwidth cost us nearly $175/month. Now the Internet has grown, and demand for bandwidth has increased. We now place servers on minimum 10mbs connections. These connections cost up to several thousand dollars per month, mostly to cover the costs of dedicated wire infrastructure. These costs are beyond the reach of many, and the Internet is rapidly becoming an unlevel playing field.

DSL (Digital Subscriber Lines) are now becoming available in several parts of the country. For what I used to pay for a dedicated 28.8kbs connection, I will soon be able to get a 192kbs connection, over six times as fast as the connection a few years ago, but less sufficient for what I need to do with it.

The biggest problem with regard to price and technology is the "last mile" to the home. With the nation's ever-growing Fiber-Optic infrastructure, there is much more capacity than current phone and data traffic come near to filling. The theoretical limits of bandwidth are far beyond what the equipment on either side of the Fiber-Optic cable can currently handle. As routing technology improves, we'll be able to get so much more bandwidth over the exact same wires and cables. Yet the costs jump prohibitively when this service is delivered to the end user's physical location.

The "last mile" is difficult and expensive for everyone, whether you're a Television Cable company sinking huge

investment into the ability to provide upstream bandwidth, or whether you're the phone company needing to dig up streets in order to deliver services to jacks in homes or businesses. There are very large, legitimate costs to installing and maintaining these wires.

The ability to cover this last mile (or even the last 20 miles) using unlicensed, Ultra-Wide Band radios is an attractive way to provide connectivity to homes, businesses, schools, community centers, and government offices. Why should there be a monthly wire fee (often prohibitively expensive), when that wire isn't needed?

Traditionally, Spread Spectrum Wireless Radios have been expensive, due to the large investment in Research and Development; the need to conform to exacting (and limiting) specifications; and the low production runs due to the low demand for such expensively priced radios.

If Spread Spectrum Radios are allowed to operate at lower frequencies than those currently authorized, and at wider bands than now permitted, the technical innovations that will develop will allow us to bring the cost of bandwidth down through the floor. This will help our country and our businesses to sustain their global competitive advantage. Alternately, with the higher priced, wire based bandwidth, many people, businesses, schools, and government offices will be priced out of decent connectivity, putting our country at a significant disadvantage.

I would thus like to urge the Federal Communications Commission to loosen up the limiting restrictions on spread spectrum radio, so we may build a stronger national infrastructure.

The need for more powerful, no-license, non-interfering digital radios can not be stressed enough.

Thank you very much for your time and attention.

Brian Zisk

zisk@well.com

http://www.transaction.net